

December 1, 2004

Ms. Marlene H Dortch  
Secretary  
Office of the Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: Erratum, ET Docket 04-186, In the Matter of Unlicensed Operation in the  
TV Broadcast Bands

Dear Ms. Dortch:

On November 30<sup>th</sup>, 2004, New America Foundation, et al., submitted comment in the above proceeding. The comment had three parts: the main text plus two appendices labeled A and B. Because Appendix A was missing two pages, we hereby resubmit the corrected Appendix A along with this notice.

Respectfully Submitted,

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**APPENDIX A: SPECTRUM USE OF SERVICES IN THE TV BAND**

1. Glossary
2. Six Case Studies—Detailed Information
3. Six Case Studies—Summary Information

## *Glossary of Services in the TV Band*

***Class A Television Stations:*** Class A television stations were created to protect qualified LPTV stations from high power TV stations. They have quasi-primary status: unlike high power stations, they cannot force other TV stations to accept interference from them; they are only protected from being displaced by other stations. LPTV licensees were eligible for Class A licenses within a specific window in 2000, if within the previous 90 days of the order, they 1) broadcast for a minimum of 18 hours per day; 2) broadcast an average of at least 3 hours per week of programming produced within the market area served by the station; 3) were in compliance with the Commission's requirements for LPTV stations; and 4) from the date of application for Class A license, the station was in compliance with the Commission's operating rules for full-power television stations. (See 47 CFR Part 73)

***Low Power Television (LPTV):*** LPTV stations broadcast signals at a low power, on a “secondary” basis to full-power stations; that is, their signals must not cause interference to the reception of existing or future high power stations, and they must accept all interference from high power stations. Unlike TV translator stations, LPTV stations may originate programming. Indeed, the FCC created low power TV to encourage community broadcasting with locally originated programming.<sup>1</sup> (See 47 CFR Part 73)

***Low Power Auxiliary Stations (LPAS):*** Along with wireless microphones, wireless assist video devices make up a class of devices called Low Power Auxiliary Stations, which have secondary status in the broadcast bands:

- ***Wireless Microphones:*** LPAS are most commonly used as wireless microphones by motion picture, television, or cable producers under Subpart H of Part 74 of the Code of Federal Regulations. The rules have also been extended to the National Football League. This type of wireless microphone is generally used to assist production and transmits over distances of approximately 300 meters. Licensees must submit to the FCC the purpose and place of use. They are limited to 250 mW in UHF and 50 mW in VHF with an occupied bandwidth of 200 kHz.
- ***Wireless Assist Video Devices (WAVDs):*** WAVDs operate in bands 180-210 MHz and 470-698 MHz.<sup>2</sup> Video assist devices produce low resolution images that can be used by members of a production crew to make decisions with respect to content, lighting, and image framing. Often, these video assist devices are connected via cable, but wireless decreases costs and increases efficiency for users. They are limited to 250mW but can transmit across 6 MHz.

***Medical Telemetry:*** Wireless medical telemetry is used to monitor patient physiological parameters (e.g., cardiac signals) over a short distance using a transmitter worn by the patient and a central monitoring station. These devices have the advantage of allowing patient

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<sup>1</sup> See Federal Communications Commission, “LPTV Fact Sheet,” <http://www.fcc.gov/mb/video/files/LPTVFactSheet.html>

<sup>2</sup> See 47 CFR Ch. I (10–1–03 Edition), section 74.870(c).

movement without tethering the patient to a bedside monitor with a hard-wired connection.<sup>3</sup> Until the establishment of Wireless Medical Telemetry Services (WMTS), medical telemetry operated only in the 608-614 MHz band, as an unlicensed secondary user, sharing the band with 12 radio astronomy stations that do not cause significant interference.<sup>4</sup> After WMTS, medical telemetry users have primary or co-primary status in 1395-1400 MHz and 1429-1432 MHz in addition to 608-614 MHz.

***Private Land Mobile Radio Services (PLMRS):*** PLMR systems are used by companies, local governments, and other organizations to meet a wide range of communication requirements, including coordination of people and materials, important safety and security needs, and quick response in times of emergency. Public safety agencies, utilities, railroads, manufacturers, and a wide variety of other businesses use these radio systems every day. The services included in PLMRS are Public Safety, Industrial/Business, Private Land Mobile Paging, and Radiolocation.<sup>5</sup> PLMR services include sport radios, public safety radios (police, fire, EMS, etc.) as well as business/industrial radios (delivery, transportation, taxis, truckers, railroads, utilities, fast-food service, etc.).<sup>6</sup> (See 47 CFR Part 90)

***TV Booster Stations:*** Booster stations are licensed only to full-power television stations for providing signal coverage over terrain-shadowed parts of the service area. These stations broadcast on the same frequency as their parent station. (See 47 CFR Part 73)

***TV Translator Stations:*** TV translator stations rebroadcast the programs of high-power television stations by altering their frequency and amplitude to overcome transmission over long distances or intervening terrain. TV translator stations cannot originate more than 30 seconds of programming per hour, and are not limited to operation within the contour of the station that they rebroadcast. Most of the 4,700 TV translator stations are in the western mountainous states.<sup>7</sup> (See 47 CFR Part 73)

***Unlicensed Wireless Microphones:*** Used by small users such as schools, sports teams, theatre groups, churches and hospitals, wireless microphones allow wireless communications using low power FM signals within a small space, usually 300 meters. Wireless microphones have secondary status on their bands of spectrum, which include 49-108 MHz, 169-216 MHz, 450-806 MHz, and 900-952 MHz. These microphones were originally only allowed on certain frequencies, until a series of FCC orders in the late 1980s expanded their use across the broadcast band, allowing microphones to operate on frequencies between TV channels.

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<sup>3</sup> See Food and Drug Administration, "What is Wireless Medical Telemetry?" <http://www.fda.gov/cdrh/emc/wmt-about.html#1>

<sup>4</sup> See Federal Communications Commission, "Wireless Medical Telemetry," <http://wireless.fcc.gov/services/personal/medtelemetry/>

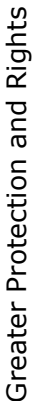
<sup>5</sup> See Federal Communications Commission, "PLMRS," <http://wireless.fcc.gov/services/plmrs/>

<sup>6</sup> See Federal Communications Commission, "Wireless Medical Telemetry," <http://wireless.fcc.gov/services/personal/medtelemetry/>

<sup>7</sup> See NPRM in FCC 03-198, Para 6, 10; <http://www.fcc.gov/mb/video/files/LPTVFactSheet.html>

## **SIX CASE STUDIES – DETAILED INFORMATION**

**Los Angeles DMA:**  
Rank #2  
TV Households: 5,402,260  
Market Type: Top Ten Urban



(**Bold** indicates multiple service rights for the same company in the same market)

- \* Methodology: TV station assignments were compiled using the Center for Public Integrity's Media Tracker Database; Wireless Bureau licenses (700 MHz Band Licenses, PLMRS, and Auxiliary Stations) were accessed from the FCC's Universal Licensing System, in a 1 KM Radius around Los Angeles. (Coordinates: 340308N, 1181434W); Medical Telemetry and Radio Astronomy spectrum allocations are based on 47 CFR reservations; Part 15 Wireless Mic assignments are based on Shure's recommendation to use channels where TV stations do not operate. NAF's post-DTV plan is based on protecting all incumbents except LPAS, Wireless Mics, and grandfathered medical telemetry equipment.

**G** Grandfathered users operating on a secondary basis

Note: There are also approximately 4,700 translator stations, largely in western states

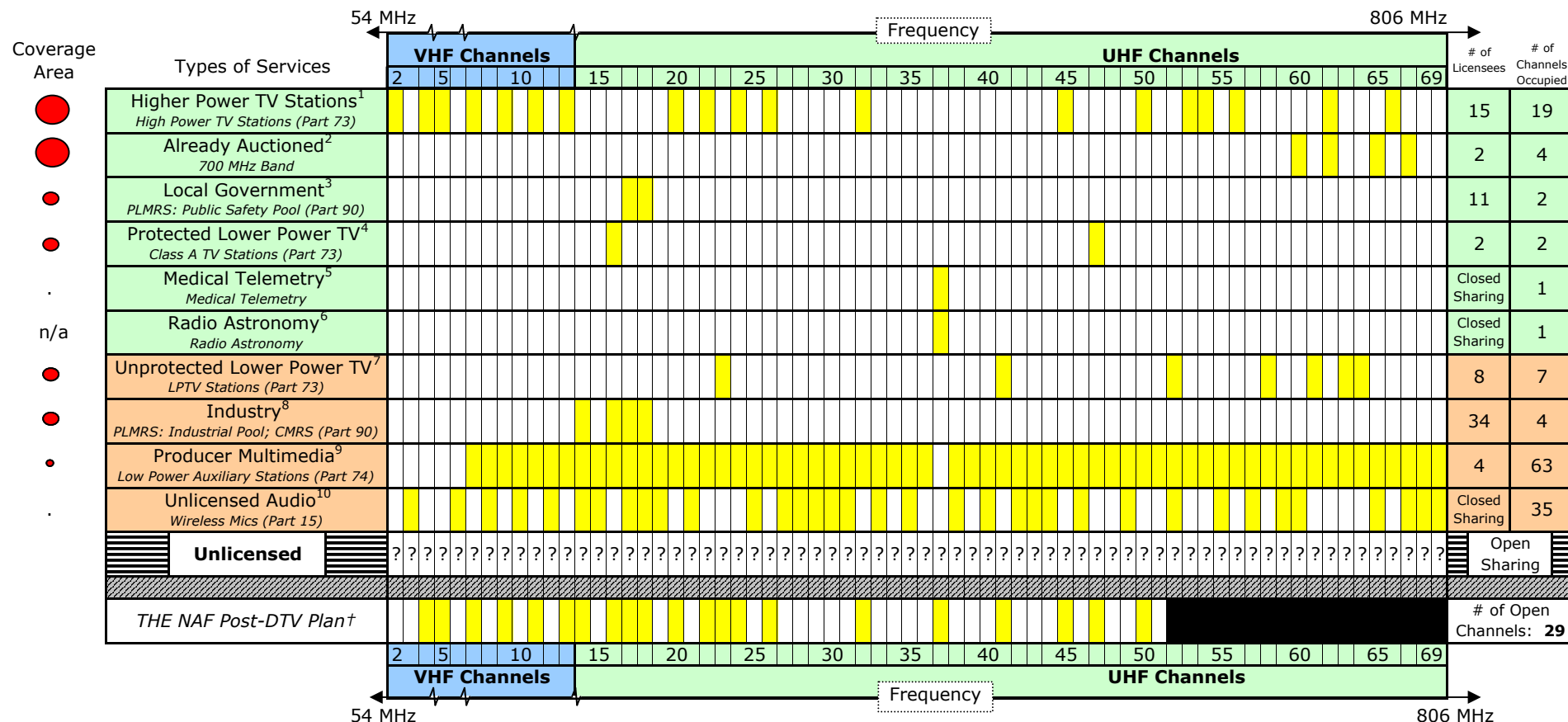
# Broadcast Band Assignments and Allocations: Washington, D.C.\*

Washington, D.C. DMA:

Rank #8

TV Households: 2,224,070

Market Type: Top Ten Urban



Notes: Examples of Licensees in Each Category

(**Bold** indicates multiple service rights for the same company in the same market)

- Higher Power TV Stations: NBC, ABC, Fox, CBS, UPN, Howard University  
Greater Washington Educational Telecom Assn., WBDC Broadcasting, Inc.
- Already Auctioned (Note: 1 MHz guardband of channels 60 and 65 auctioned, 2 MHz guardband of channels 62 and 67 auctioned): Nextel, Dominion 700
- Public Safety: Cities of Mount Rainer, Takoma Park, Fairfax; Counties of Montgomery, Prince George, Anne Arundale; Bladensburg Fire Dept.
- Protected Lower Power TV: Entravision Communications, Towson University
- Medical Telemetry: Shared
- Radio Astronomy: 17 Observatories Nationwide
- Unprotected Lower Power TV: Asia Vision, ONDA Capital, Inc.
- Industry: Northrop Grumman, Skytel, Intelsat
- Producer Multimedia: ABC, WDBJ Television, Inc.
- Unlicensed Audio: Shared

Note: There are also approximately 4,700 translator stations, largely in western states

\* Methodology: TV station assignments were compiled using the Center for Public Integrity's Media Tracker Database; Wireless Bureau licenses (700 MHz Band Licenses, PLMRS / CMRS, and Auxiliary Stations) were accessed from the FCC's Universal Licensing System, in a 1 KM Radius around Washington, D.C. (Coordinates: 385320N, 0770002W); Medical Telemetry and Radio Astronomy spectrum allocations are based on 47 CFR reservations; Part 15 Wireless Mic assignments are based on Shure's recommendation to use channels where TV stations do not operate. NAF's post-DTV plan is based on protecting all incumbents except LPAS, Wireless Mics, and grandfathered medical telemetry equipment.

† Includes unassigned channels that could be opened for unlicensed sharing with more advanced technologies and different policies than envisioned in this NPRM.

**G** Grandfathered users operating on a secondary basis

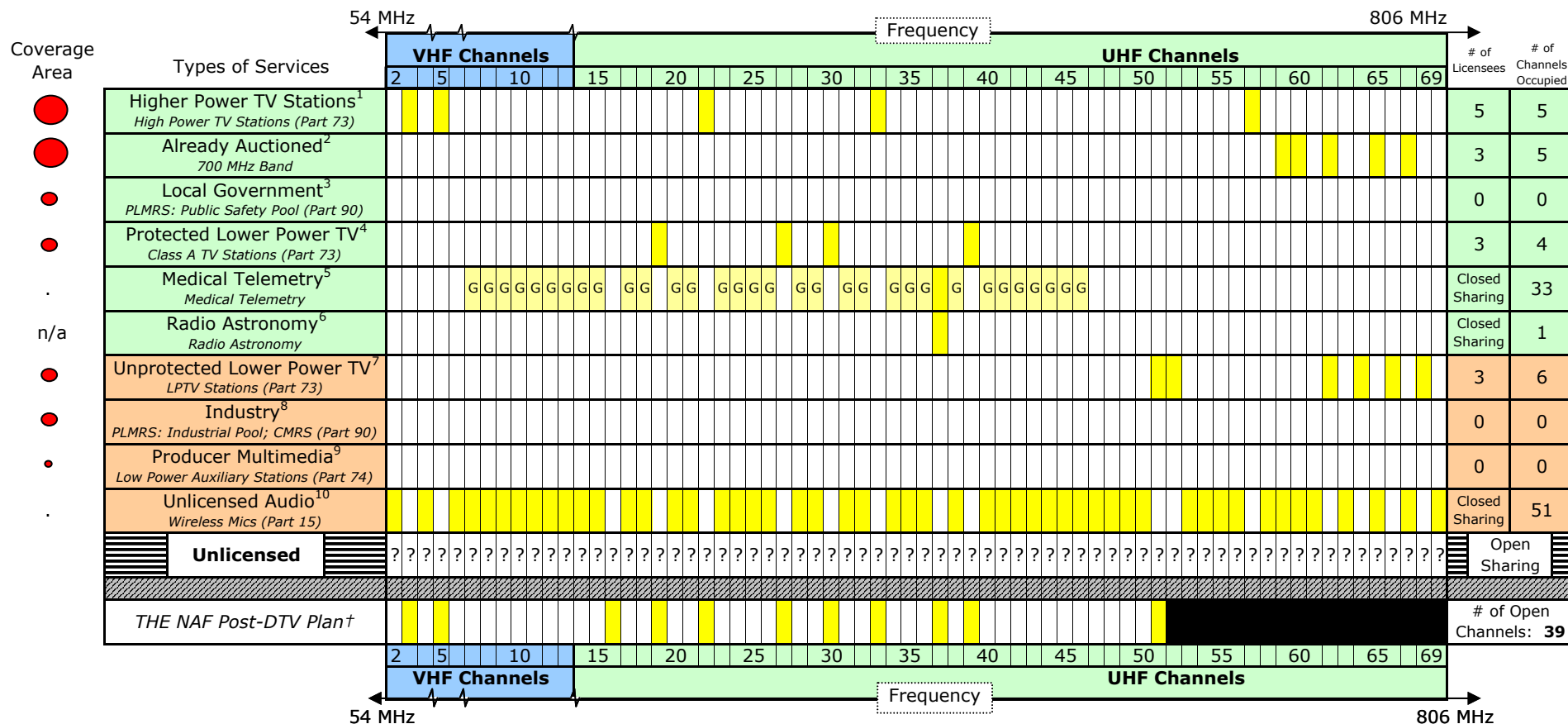
# Broadcast Band Assignments and Allocations: Burlington, VT\*

**Burlington-Plattsburgh DMA:**

Rank #89

TV Households: 323,070

Market Type: Medium Urban



Notes: Examples of Licensees in Each Category

(**Bold** indicates multiple service rights for the same company in the same market)

- Higher Power TV Stations: Mansfield TV, Hearst, Corp., Straightline Communications
- Already Auctioned (Note: 1 MHz guardband of channels 60 and 65 auctioned, 2 MHz guardband of channels 62 and 67 auctioned): Nextel Communications, Pegasus Guard Band, Vermont Telephone Company
- Local Government: None
- Protected Lower Power TV: **NYN, LLC**, Plattsburgh Partners
- Medical Telemetry: Shared
- Radio Astronomy: 17 Observatories Nationwide
- Unprotected Lower Power TV: Vermont Wireless Cooperative, **NYN, LLC**
- Industry: None
- Producer Multimedia: None
- Unlicensed Audio: Shared

Note: There are also approximately 4,700 translator stations, largely in western states

\* Methodology: TV station assignments were compiled using the Center for Public Integrity's Media Tracker Database; Wireless Bureau licenses (700 MHz Band Licenses, PLMRS, and Auxiliary Stations) were accessed from the FCC's Universal Licensing System, in a 1 KM Radius around Burlington. (Coordinates: 442833N, 0731245W); Medical Telemetry and Radio Astronomy spectrum allocations are based on 47 CFR reservations; Part 15 Wireless Mic assignments are based on Shure's recommendation to use channels where TV stations do not operate. NAF's post-DTV plan is based on protecting all incumbents except LPAS, Wireless Mics, and grandfathered medical telemetry equipment.

† Includes unassigned channels that could be opened for unlicensed sharing with more advanced technologies and different policies than envisioned in this NPRM.

**G** Grandfathered users operating on a secondary basis



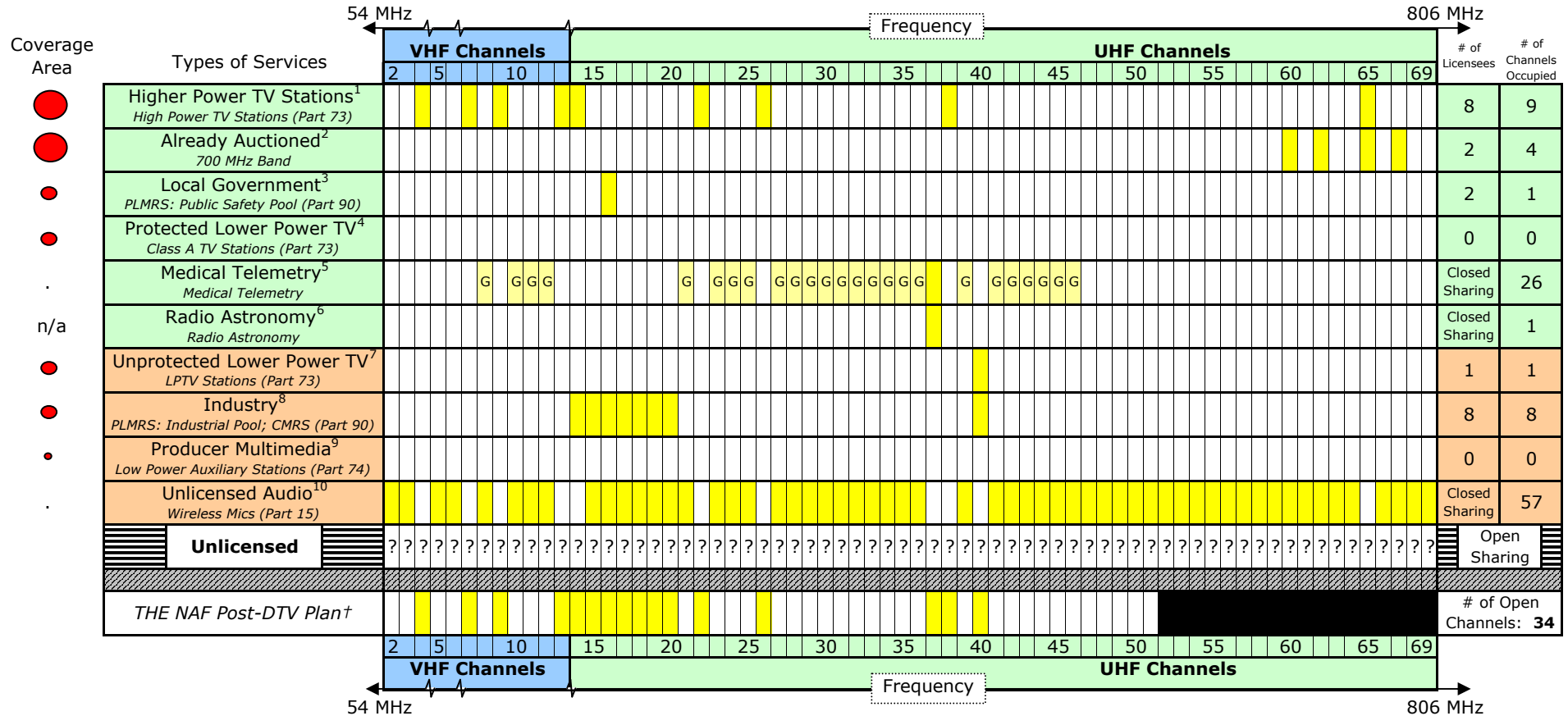
# Broadcast Band Assignments and Allocations: El Paso, TX\*

## El Paso DMA:

Rank #100

TV Households: 283,870

Market Type: Medium Urban, Border Area



Notes: Examples of Licensees in Each Category

(**Bold** indicates multiple service rights for the same company in the same market)

1. Higher Power TV Stations: Pappas Telecasting, Cox Enterprises, Entravision Communications
2. Already Auctioned (Note: 1 MHz guardband of channels 60 and 65 auctioned, 2 MHz guardband of channels 62 and 67 auctioned): Access Spectrum, PTPMS II Communications
3. Local Government: Cities of Red Oak and Waxahachie
4. Protected Lower Power TV: None
5. Medical Telemetry: Shared
6. Radio Astronomy: 17 Observatories Nationwide
7. Unprotected Lower Power TV: Broadcast Group, Ltd.
8. Industry: Nextel, Victoria Communications, Aeowave Technologies
9. Producer Multimedia: None
10. Unlicensed Audio: Shared

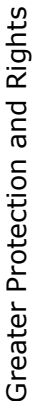
Note: There are also approximately 4,700 translator stations, largely in western states

\* Methodology: TV station assignments were compiled using the Center for Public Integrity's Media Tracker Database; Wireless Bureau licenses (700 MHz Band Licenses, PLMRS, and Auxiliary Stations) were accessed from the FCC's Universal Licensing System, in a 1 KM Radius around El Paso (Coordinates: 314521N, 1062911W); Medical Telemetry and Radio Astronomy spectrum allocations are based on 47 CFR reservations; Part 15 Wireless Mic assignments are based on Shure's recommendation to use channels where TV stations do not operate. NAF's post-DTV plan is based on protecting all incumbents except LPAS, Wireless Mics, and grandfathered medical telemetry equipment.

† Includes unassigned channels that could be opened for unlicensed sharing with more advanced technologies and different policies than envisioned in this NPRM.

**G** Grandfathered users operating on a secondary basis

**Juneau DMA:**  
Rank #206  
TV Households: 24,840  
Market Type: Small Rural



**(Bold indicates multiple service rights for the same company in the same market)**

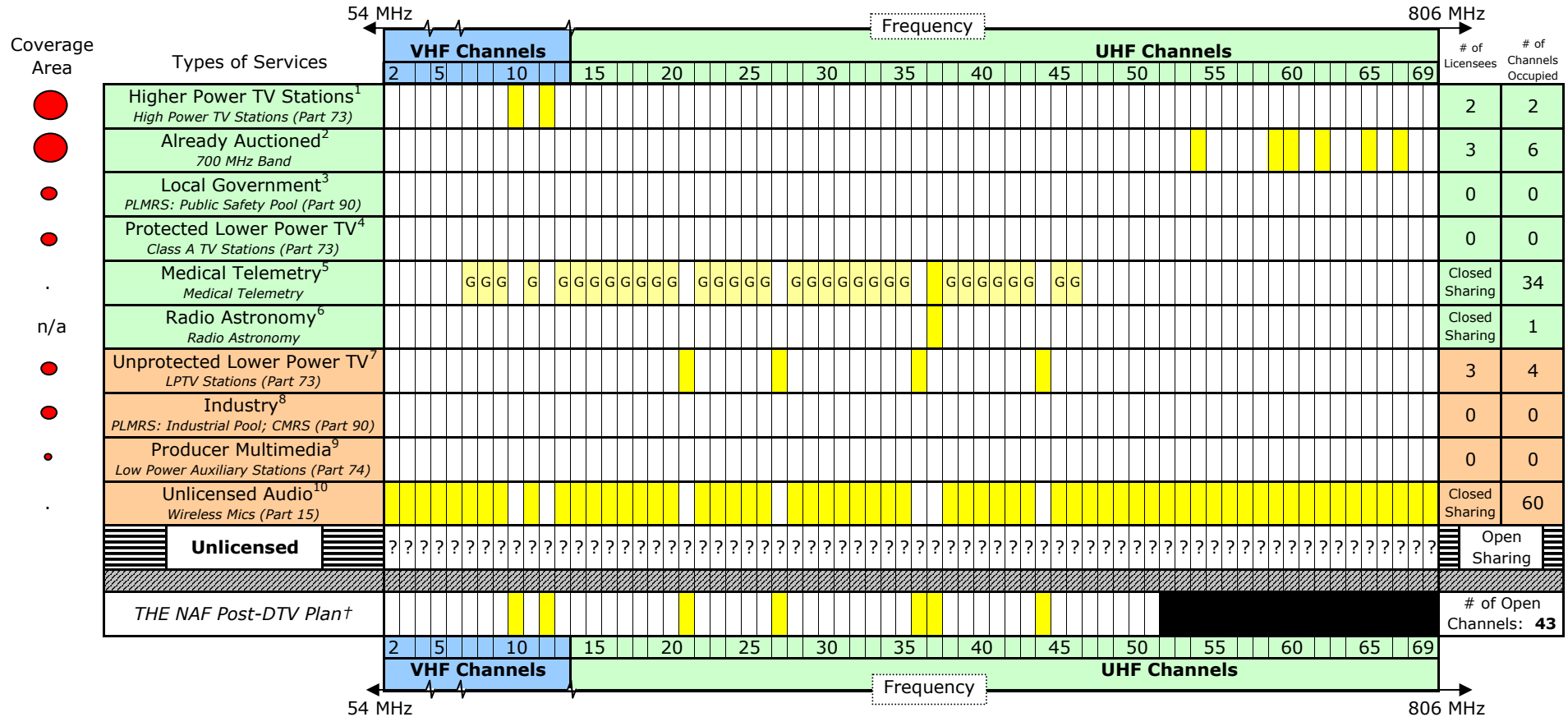
- Note: There are also approximately 4,700 translator stations, largely in western states

† Includes unassigned channels that could be opened for unlicensed sharing with more advanced technologies and different policies than envisioned in this NPRM.

G Grandfathered users operating on a secondary basis

# Broadcast Band Assignments and Allocations: Helena, MT\*

**Helena DMA:**  
Rank #207  
TV Households: 24,910  
Market Type: Small Rural



Notes: Examples of Licensees in Each Category

(**Bold** indicates multiple service rights for the same company in the same market)

- Higher Power TV Stations: Rocky Mountain Broadcasting Co., Sunbelt Communications
- Already Auctioned ((Note: 1 MHz guardband of channels 60 and 65 auctioned, 2 MHz guardband of channels 62 and 67 auctioned): Nextel Communications, Pegasus Guard Band, Ronan Telephone Company
- Local Government: None
- Protected Lower Power TV: None
- Medical Telemetry: Shared
- Radio Astronomy: 17 Observatories Nationwide
- Unprotected Lower Power TV: Wireless Access, LLC, KFBB Corp.
- Industry: None
- Producer Multimedia: None
- Unlicensed Audio: Shared

Note: There are also approximately 4,700 translator stations, largely in western states

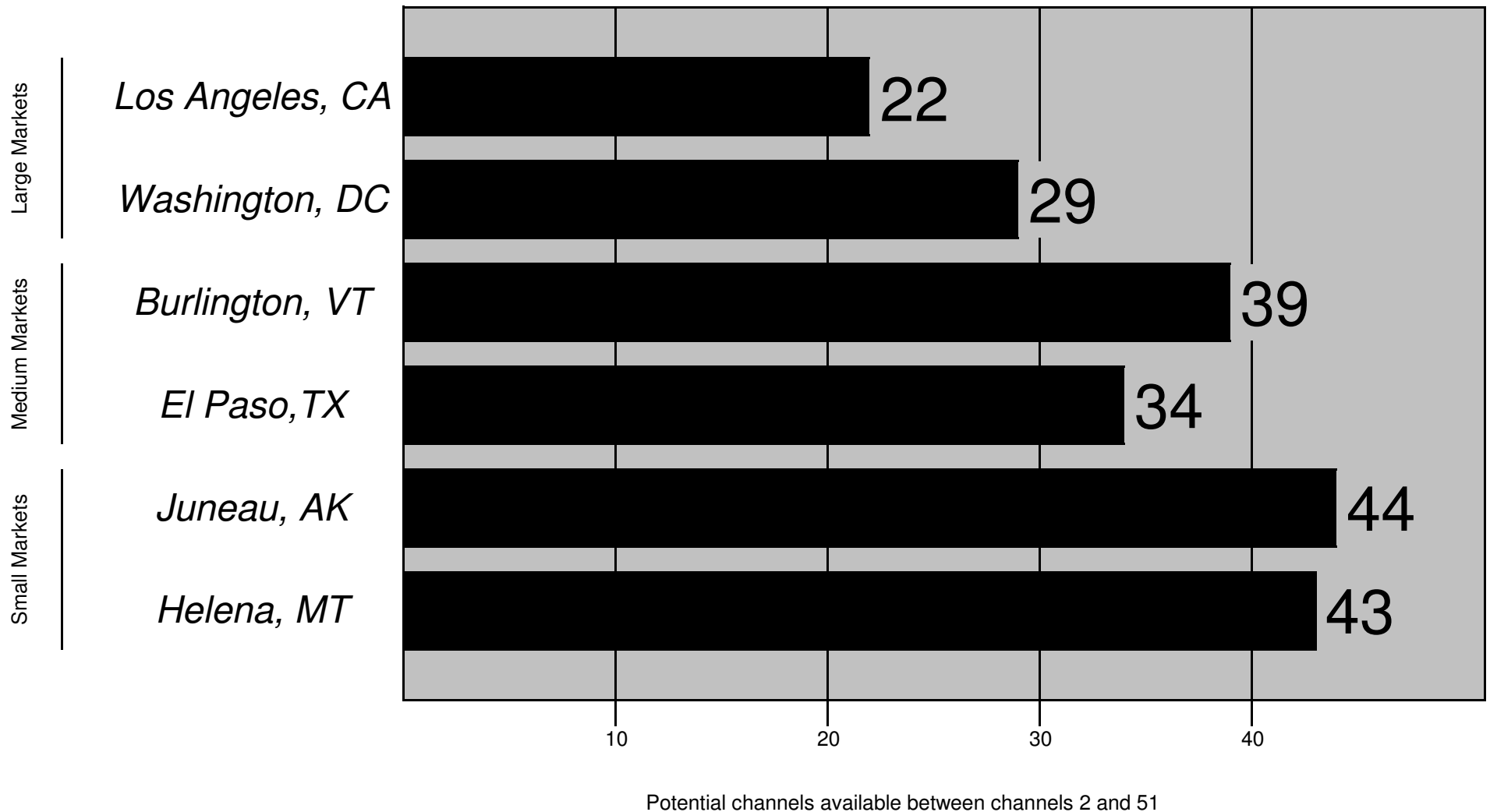
\* Methodology: TV station assignments were compiled using the Center for Public Integrity's Media Tracker Database; Wireless Bureau licenses (700 MHz Band Licenses, PLMRS, and Auxiliary Stations) were accessed from the FCC's Universal Licensing System, in a 1 KM Radius around Helena. (Coordinates: 463534N, 1120207W); Medical Telemetry and Radio Astronomy spectrum allocations are based on 47 CFR reservations; Part 15 Wireless Mic assignments are based on Shure's recommendation to use channels where TV stations do not operate. NAF's post-DTV plan is based on protecting all incumbents except LPAS, Wireless Mics, and grandfathered medical telemetry equipment.

† Includes unassigned channels that could be opened for unlicensed sharing with more advanced technologies and different policies than envisioned in this NPRM.

G Grandfathered users operating on a secondary basis

## **SIX CASE STUDIES -- SUMMARY INFORMATION**

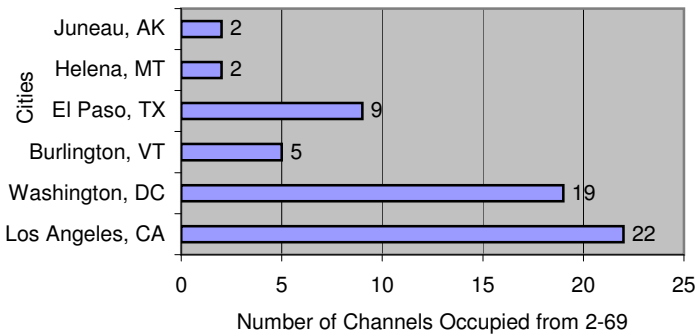
# Potential Channels Available for Unlicensed Access\*



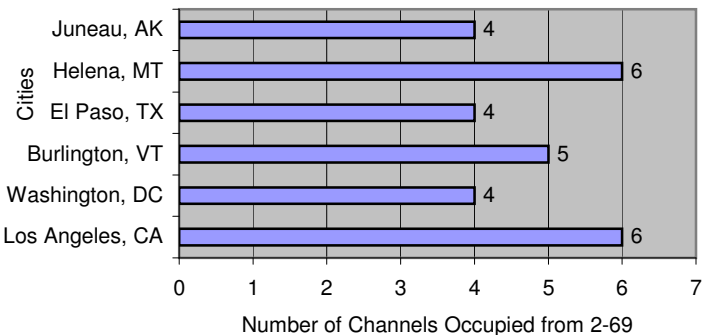
\* Includes unassigned channels that could be opened for unlicensed sharing with more advanced technologies and different policies than envisioned in this NPRM.

# Summary of Usage in 6 Case Studies by Service Type

## High Power TV Channels

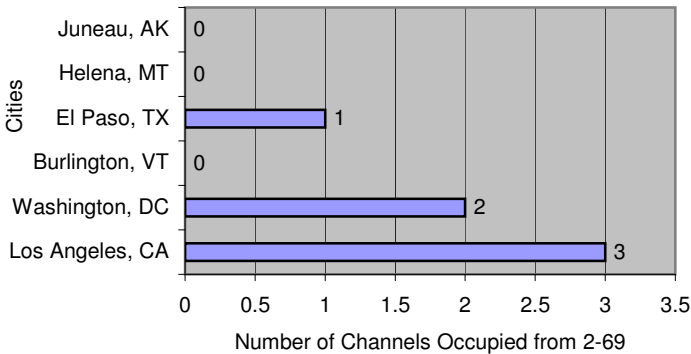


## Already Auctioned



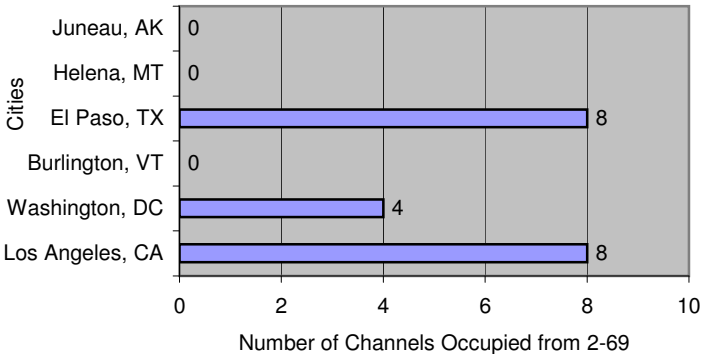
## Local Government

(Private Land Mobile Radio Services: Public Safety Pool)



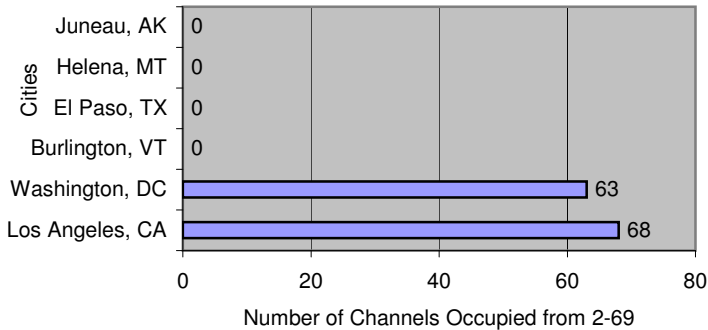
## Industry

(Private Land Mobile Radio Services: Industrial Pool)



## Producer Multimedia

(Low Power Auxiliary Stations)



## Unlicensed Audio

(Wireless Mics)

